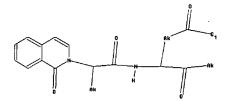
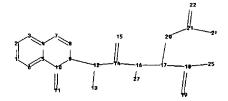
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chain nodes :

11 12 13 14 15 16 17 18 19 20 21 22 24 25 27

ring nodes :

1 2 3 4 5 6 7 8 9 10

chain bonds :

9-12 10-11 12-13 12-14 14-15 14-16 16-17 16-27 17-18 17-20 18-19 18-25

20-21 21-22 21-24

ring bonds :

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10

exact/norm bonds :

4-7 5-10 7-8 8-9 9-10 9-12 10-11 12-13 14-15 14-16 16-17 17-20 18-19

18-25 20-21 21-22 21-24

exact bonds :

12-14 16-27 17-18

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

G1:0, N

Match level:

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS

19:CLASS 20:CLASS 21:CLASS 22:CLASS 24:CLASS 25:CLASS 27:CLASS

L1 STRUCTURE UPLOADED

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L2 4 SEA SSS SAM L1

=> s 11 full

L3 51 SEA SSS FUL L1

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     2001:435047 CAPLUS Full-text
ΑN
DN
     135:46192
TI
     Synthesis and use of heterocyclic substituted-amido halopentanoate
     derivatives as caspase inhibitors
ΙN
     Golec, Julian; Charifson, Paul; Charrier, Jean-Damien; Binch, Hayley
PA
     Vertex Pharmaceuticals Incorporated, USA
SO
     PCT Int. Appl., 88 pp.
     CODEN: PIXXD2
DT
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     English
LA
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     PATENT NO.
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                                          APPLICATION NO.
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    WO 2000-US33260
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    MARPAT 135:46192
OS
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GΙ

$$\begin{array}{c|c}
X^2 \\
X^3 \\
X & X_1 \\
X &$$

AΒ Compds. I and their synthesis are claimed [wherein; R1 = H, CN, CHN2, (substituted)alkyl, aryl, non-aromatic heterocycle, etc.; R2 = CH2COOH, COOH (or ester/amide/isosteres of); R3 = H or alkyl; X1, X3 = N or C; X2 = bond, O, S, N or C wherein any X with suitable valence may bear a substituent; each C in ring A may also be substituted; ring A substituents = H, halo, alkyl, aryl, OH, CN, etc.; A may also bear a fused ring]. Over 20 synthetic examples are given. For instance; substitution of bromoacetic acid Et ester with the corresponding isoquinolone followed by saponification and coupling to 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester provided the hydroxy ester intermediate. Oxidation of the hydroxy ester followed by treatment with TFA yielded II as a white powder. Compds. of the invention are caspase inhibitors; data is provided for caspase-1,-3,-7 and caspase-8 inhibition (Ki). Also determined was inhibition of $IL-1\beta$ secretion from peripheral blood mononuclear cells and activity in a Fas ligand induced apoptosis assay. Compound II had Ki (M-1 s-1) of 248,000 for caspase-1, 130,000 for caspase-3 and an IC50 of 2.9 μM for IL-1 β secretion. Compds. I may be used as a component of immunotherapy for the treatment of cancer.

IT 344461-03-6P 344461-10-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis and use of heterocyclic substituted-amido halopentanoate derivs. as caspase inhibitors)

RN 344461-03-6 CAPLUS

CN Pentanoic acid, 5-fluoro-4-oxo-3-[[(2S)-1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 344461-10-5 CAPLUS

CN Benzoic acid, 2,6-dichloro-, (3S)-4-carboxy-2-oxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]butyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT 344461-30-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and use of heterocyclic substituted-amido halopentanoate derivs. as caspase inhibitors)

RN 344461-30-9 CAPLUS

CN Benzoic acid, 2,6-dichloro-, (3S)-5-(1,1-dimethylethoxy)-2,5-dioxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]pentyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

=> s 14 not 15

L6 7 L4 NOT L5

=> dis 16 1-7 bib abs fhitstr

- L6 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 2007:593290 CAPLUS Full-text
- DN 147:202903
- TI Exploring Peptide-likeness of Active Molecules Using 2D Fingerprint Methods
- AU Eckert, Hanna; Bajorath, Juergen
- CS Department of Life Science Informatics, Rheinische Friedrich-Wilhelms-Universitaet, Bonn, D-53113, Germany
- SO Journal of Chemical Information and Modeling (2007), 47(4), 1366-1378 CODEN: JCISD8; ISSN: 1549-9596
- PB American Chemical Society
- DT Journal
- LA English
- AB Similarity searching for peptide-like small mols. is a difficult task because the amide backbone shared by these mols. tends to mask features that determine biol. activity. The authors have investigated 2D fingerprints for their ability to differentiate between peptide-like mols. having different activity or to facilitate a peptidomimetic transition from mols. with strong peptide character to compds. having little or none. For these purposes, different

compound activity classes were assembled consisting of mols. having strong, moderate, and weak peptide character. For the quantification of peptide character, a "peptide flavor" index was introduced. In systematic search calcns., an encouraging finding has been that most of the investigated 2D fingerprints were capable of distinguishing between peptide-like mols. having different activities. However, only two fingerprints of different design also displayed a strong tendency to detect mols. with decreasing peptide character. One of these search tools is a recently introduced property descriptor-based fingerprint that showed two addnl. advantages: its flexible design could be adjusted to increasingly recover mols. with little peptide-likeness, and in addition, its search performance was not affected by differences in mol. size. 721398-07-8

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); BIOL (Biological study)

(exploring peptide-likeness of active mols. using 2D fingerprint methods)

RN 721398-07-8 CAPLUS

IT

CN Pentanoic acid, 3-[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-4-oxo-5-(2,3,5,6-tetrafluorophenoxy)-,
1-methyl-1-phenylethyl ester, (3S)- (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:150976 CAPLUS Full-text

DN 146:235880

TI Preparation of caspase inhibitor prodrugs

IN Durrant, Steven; Charrier, Jean-Damien; Studley, John

PA Vertex Pharmaceuticals Incorporated, USA

SO PCT Int. Appl., 49pp.

CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

T TITA .	CIVI																	
	PAT	CENT	NO.			KIN	D	DATE			APPL	ICAT	ION	NO.		D	ATE	
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				A3 20070607														
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IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

US 2007155718 A1 20070705 US 2006-489939 20060720

PRAI US 2005-703375P P 20050728

OS MARPAT 146:235880

AΒ This invention relates to prodrugs of caspase inhibitors comprising of a furo [3,2-d]oxazolin-5-one moiety which, under specific conditions, can convert into biol. active compds., particularly caspase inhibitors. This invention also relates to the processes for preparing these prodrugs of caspase inhibitors. This invention further relates to pharmaceutical compns. comprising said prodrugs and to the use thereof for the treatment of diseases related to inflammatory or degenerative conditions. Trifluoroacetic anhydride was added to a solution of (S)-carbazole-9- carboxylicacid 1-(1-carboxymethyl-3-fluoro-2-oxo-propylcarbamoyl)-2-methyl- Pr ester in anhydrous dichloromethane under a nitrogen atmosphereat ambient temperature After one hour, the reaction was diluted with anhydrous dichloromethane and tris-(2aminoethyl) amine polystyrene resin was added and the reaction was stirred for a furtherone hour. The resin was removed by filtration and thefiltrate concentrated in vacuo and triturated with dichloromethane and petroleum ether to give (S)-carbazole-9-carboxylic acid 1-(3a-fluoromethyl-5-oxo-3a,5,6,6atetrahydro-furo[3,2-d]oxazol-2-yl)-2- methyl-propylester as a white solid.

IT 618460-08-5

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of caspase inhibitor prodrugs)

RN 618460-08-5 CAPLUS

CN Pentanoic acid, 3-[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-4-oxo-5-(2,3,5,6-tetrafluorophenoxy)- (CA INDEX NAME)

Absolute stereochemistry.

L6 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:565214 CAPLUS Full-text

DN 141:106388

TI Preparation of 4-oxo-3-(1-oxo-1H-isoquinolin-2-ylacetylamino)-pentanoic acid ester and amide derivatives as caspase inhibitors

IN Charrier, Jean-Damien; Mortimore, Michael; Studley, John R.

PA Vertex Pharmaceuticals Incorporated, USA

SO PCT Int. Appl., 104 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2004058718 A1 20040715 WO 2003-US40870 20031222

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

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     WO 2003-US40870
                                 20031222
    MARPAT 141:106388
OS
GΙ
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The title compds. of formula I [X = alkoxy, (substituted) NH2, etc.; Y = halo, trifluorophenoxy, tetrafluorophenoxy; R1 = alkyl; R2, R3 = H, halo, OCF3, CN, CF3] are prepared. The present invention also provides pharmaceutical compns. and methods using such compns. for treating a caspase-mediated disease, particularly in the central nervous system. Thus, II was prepared from 7-chloroisochromen-1-one (preparation given), (S)-2-aminobutyric acid tert-Bu ester and 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester.

II 640286-59-5P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of (oxoisoquinolinylacetylamino)-oxopentanoic acid ester and amide derivs. as caspase inhibitors)

RN 640286-59-5 CAPLUS

CN Pentanoic acid, 3-[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-5-fluoro-4-oxo-, 1,1-dimethylethyl ester (CA INDEX NAME)

L6

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ANSWER 4 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ΑN
     2004:20662 CAPLUS Full-text
DN
     140:77410
     Preparation of isoquinolinone and quinazolinone peptide derivatives as
TΙ
     caspase inhibitors
ΙN
     Knegtel, Ronald; Mortimore, Michael; Studley, John; Millan, David
PΑ
     Vertex Pharmaceuticals Incorporated, USA
SO
     PCT Int. Appl., 95 pp.
     CODEN: PIXXD2
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     Patent
LA
     English
FAN.CNT 1
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PRAI US 2002-392592P
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     WO 2003-US20557
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                                20030627
     MARPAT 140:77410
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$$\mathbb{R}^3$$
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 \mathbb{R}^4

The invention relates to isoquinolinones and quinazolinones I [X is CH or N; Y is halo, tri- or tetrafluorophenoxy; R2 is alkyl; R3 is H, halo, OCF3, CN, or CF3; R4 is groups R3 or alkylthio, (un)substituted Ph, phenoxy, or phenylthio; with the proviso that when Y is halo, then R3 and R4 are not both H] which are caspase inhibitors useful in compns. for the treatment of various diseases, conditions, or disorders. Thus, I (X = CH, Y = F, R2 = Et, R3 = H, R4 = Cl), prepared by coupling of (S)-2-(7-chloro-1-oxo-1H-isoquinolin-2-yl)butyric acid (preparation given) with 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester, had Ki (M-1 s-1) > 500,000 for inhibition of caspase-1 or caspase-3, Ki 100,000-500,000 for inhibition of caspase-8, and IC50 < 1 μ M for inhibition of interleukin-1 β secretion.

IT 618459-84-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of isoquinolinone and quinazolinone peptide derivs. as caspase inhibitors)

RN 618459-84-0 CAPLUS

CN Pentanoic acid, 3-[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-5-fluoro-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:991174 CAPLUS Full-text

DN 140:28050

TI Synthesis of peptide heterocyclic derivatives as caspase inhibitors

IN Golec, Julian M. C.; Charifson, Paul S.; Charrier, Jean-Damien; Binch,
Hayley

PA UK

SO U.S. Pat. Appl. Publ., 28 pp. CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
							
PI PRAI OS GI	US 2003232846 US 2002-166437 MARPAT 140:28050	A1	20031218 20020610	US 2002-166437	20020610		

$$\begin{array}{c|c} X^2 \\ X^3 \\ \end{array} X \begin{array}{c} X \\ 1 \\ \end{array} \begin{array}{c} X \\ 1$$

AΒ Compds. I and their synthesis are claimed [R1 = H, CN, CHN2, (substituted)alkyl, aryl, non-aromatic heterocycle, etc.; R2 = CH2COOH, CO2H (or ester/amide/isosteres of); R3 = H or alkyl; X1, X3 = N or C; X2 = bond, O, S, N or C wherein any X with suitable valence may bear a substituent; each C in ring A may also be substituted; ring A substituents = H, halo, alkyl, aryl, OH, CN, etc.; A may also bear a fused ring]. Over 20 synthetic examples are given. Thus, substitution of bromoacetic acid Et ester with the corresponding isoquinolone followed by saponification and coupling to 3-amino-5-fluoro-4hydroxypentanoic acid tert-Bu ester provided the hydroxy ester intermediate. Oxidation of the hydroxy ester followed by treatment with TFA yielded II as a white powder. Compds. of the invention are caspase inhibitors; data is provided for caspase-1,-3,-7 and caspase-8 inhibition (Ki). Also determined was inhibition of IL-1 β secretion from peripheral blood mononuclear cells and activity in a Fas ligand induced apoptosis assay. Compound II had Ki (M-1 s-1) of 248,000 for caspase-1, 130,000 for caspase-3 and an IC50 of 2.9 μM for IL-1 β secretion. Compds. I may be used as a component of immunotherapy for the treatment of cancer.

IT 344461-03-6P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis of peptide heterocyclic derivs. as caspase inhibitors)

RN 344461-03-6 CAPLUS

CN Pentanoic acid, 5-fluoro-4-oxo-3-[[(2S)-1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]- (9CI) (CA INDEX NAME)

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L6
     ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ΑN
     2003:855766 CAPLUS Full-text
DN
     139:345913
ΤI
     Identification of tumor necrosis factor \alpha (TNF-\alpha) modulator
     compounds, and use for treatment of TNF-mediated diseases
     Miller, Karen; Diu-Hercend, Anita; Hercend, Thierry; Lang, Paul; Weber,
ΙN
     Peter; Golec, Julian; Mortimore, Michael
     Vertex Pharmaceuticals Incorporated, USA
PA
SO
     PCT Int. Appl., 268 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                            APPLICATION NO.
                         ____
                                -----
PΤ
     WO 2003088917
                         A2
                                20031030
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                                                                    20030417
    WO 2003088917
                          A3
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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
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     AU 2003225088
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                                20031103 AU 2003-225088
                                                                   20030417
     US 2004048797
                          A1
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     EP 1499898
                          A2
                                20050126
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PRAI US 2002-374434P
                          Ρ
                                20020419
     WO 2003-US12262
                          W
                                20030417
AB
     The invention discloses methods for identifying compds. useful for regulating
     TNF-\alpha levels and/or activity. The invention also discloses methods for
     decreasing TNF-\alpha levels and/or activity. Compds. and compns. of the invention
     are useful for treating TNF-mediated diseases. The invention further
     discloses kits comprising the compds. and compns. herein and a tool for
     measuring TNF-\alpha activity and/or levels. Preparation of selected compds., e.g.
     [3S/R,(2S)]-5-fluoro-4-oxo-3-[(1- (phenothiazine-10-carbonyl)piperidine-2-
     carbonyl)amino]pentanoic acid, is described.
ΙT
     344461-03-6
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (TNF-\alpha \text{ modulator compound identification methods, and use for}
        treatment of TNF-mediated diseases)
     344461-03-6 CAPLUS
RN
     Pentanoic acid, 5-fluoro-4-oxo-3-[((2S)-1-oxo-2-(1-oxo-2(1H)-0xo-2))]
CN
     isoquinolinyl)propyl]amino]- (9CI) (CA INDEX NAME)
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ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
L6
    2003:656594 CAPLUS Full-text
ΑN
     139:191460
DN
TΙ
     Phospholipids as caspase inhibitor prodrugs
    Mortimore, Michael; Golec, Julian M. C.
ΙN
PΑ
     Vertex Pharmaceuticals Incorporated, USA
SO
     PCT Int. Appl., 256 pp.
     CODEN: PIXXD2
DT
     Patent
LA
    English
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                           APPLICATION NO.
                         A1
                                20030821
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PΤ
    WO 2003068242
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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
    AU 2003211052
                         A1
                                20030904
                                          AU 2003-211052
                                                                  20030211
    US 2004019017
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                                         US 2003-366192
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                                                                   20030211
                                20041215 EP 2003-739810
     EP 1485107
                         Α1
                                                                   20030211
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
PRAI US 2002-355889P
                         P
                                20020211
    WO 2003-US4457
                         W
                                20030211
OS
    MARPAT 139:191460
AΒ
     The invention relates to compds. which are prodrugs of caspase inhibitors and
     pharmaceutically acceptable salts thereof. The invention further relates to
     the release of caspase inhibitors from these compds. through selective bond
     cleavage. The invention further relates to pharmaceutical compns. comprising
     these compds., which are particularly well-suited for treatment of caspase-
     mediated diseases, including inflammatory and degenerative diseases. The
     invention further relates to methods for preparing compds. of this invention.
ΙT
     582317-55-3
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (phospholipids as caspase inhibitor prodrugs)
RN
     582317-55-3 CAPLUS
     Pentanoic acid, 5-fluoro-4-oxo-3-[[1-oxo-2-(1-oxo-2(1H)-
CN
     isoquinolinyl)propyl]amino]-, (3S)- (CA INDEX NAME)
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RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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STN INTERNATIONAL LOGOFF AT 10:42:20 ON 17 OCT 2007